

=> d his

(FILE 'HOME' ENTERED AT 09:17:52 ON 21 NOV 2007)

FILE 'REGISTRY' ENTERED AT 09:18:25 ON 21 NOV 2007

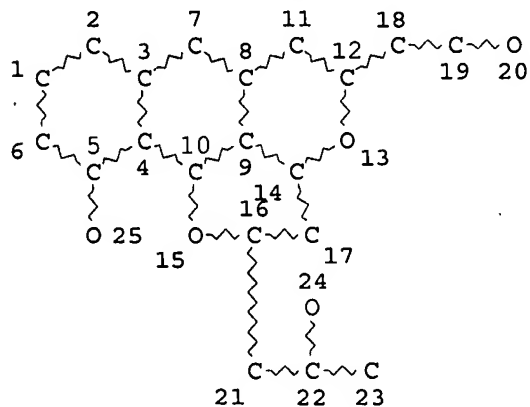
10/533,378

L1 STR  
L2 0 S L1  
L3 4 S L1 FUL

=> d l1

L1 HAS NO ANSWERS

L1 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

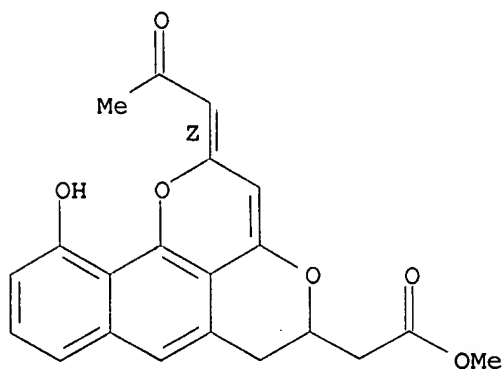
NUMBER OF NODES IS 25

STEREO ATTRIBUTES: NONE

=> d tot ide reg

L3 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2007 ACS on STN  
RN 269058-83-5 REGISTRY  
ED Entered STN: 08 Jun 2000  
CN 2H-Benzo[h]pyrano[2,3,4-de]-1-benzopyran-5-acetic acid,  
5,6-dihydro-11-hydroxy-2-(2-oxopropylidene)-, methyl ester, (2Z)- (9CI)  
(CA INDEX NAME)  
FS STEREOSEARCH  
MF C21 H18 O6  
SR CA  
LC STN Files: CA, CAPLUS, CHEMCATS

Double bond geometry as shown.



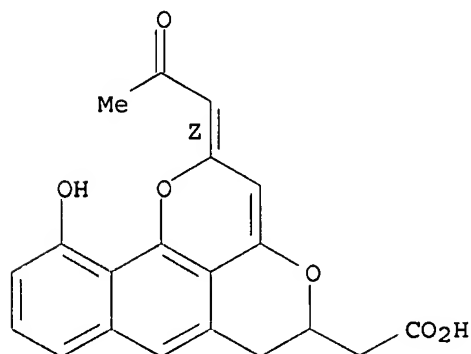
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

1 RN 269058-83-5 REGISTRY

L3 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2007 ACS on STN  
RN 269058-81-3 REGISTRY  
ED Entered STN: 08 Jun 2000  
CN 2H-Benzo[h]pyrano[2,3,4-de]-1-benzopyran-5-acetic acid,  
5,6-dihydro-11-hydroxy-2-(2-oxopropylidene)-, (2Z)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C20 H16 O6  
SR CA  
LC STN Files: CA, CAPLUS

Double bond geometry as shown.

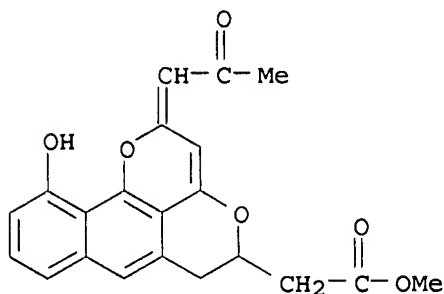


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 2 RN 269058-81-3 REGISTRY

L3 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 247933-25-1 REGISTRY  
 ED Entered STN: 19 Nov 1999  
 CN 2H-Benzo[h]pyrano[2,3,4-de]-1-benzopyran-5-acetic acid,  
 5,6-dihydro-11-hydroxy-2-(2-oxopropylidene)-, methyl ester (9CI) (CA  
 INDEX NAME)

OTHER NAMES:  
 CN S 2502  
 MF C21 H18 O6  
 SR CA  
 LC STN Files: CA, CAPLUS, CHEMCATS, IMSDRUGNEWS, IMSRESEARCH, TOXCENTER,  
 USPATFULL

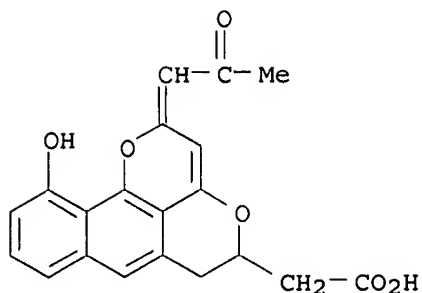


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 3 RN 247933-25-1 REGISTRY

L3 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 247933-24-0 REGISTRY  
 ED Entered STN: 19 Nov 1999  
 CN 2H-Benzo[h]pyrano[2,3,4-de]-1-benzopyran-5-acetic acid,  
 5,6-dihydro-11-hydroxy-2-(2-oxopropylidene)- (9CI) (CA INDEX NAME)

OTHER NAMES:  
 CN S 2507  
 MF C20 H16 O6  
 SR CA  
 LC STN Files: CA, CAPLUS, IMSDRUGNEWS, IMSRESEARCH, TOXCENTER, USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

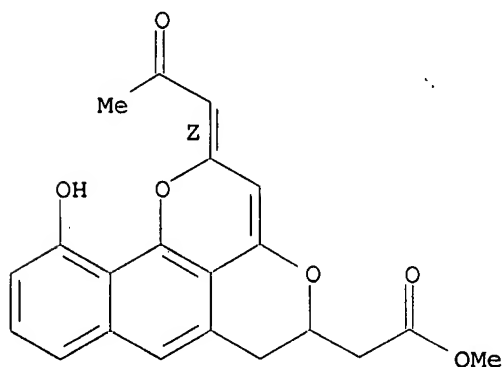
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 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

4 RN 247933-24-0 REGISTRY

=> d 1 3 sub bib abs

L3 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 269058-83-5 REGISTRY  
 ED Entered STN: 08 Jun 2000  
 CN 2H-Benzo[h]pyrano[2,3,4-de]-1-benzopyran-5-acetic acid,  
 5,6-dihydro-11-hydroxy-2-(2-oxopropylidene)-, methyl ester, (2Z)- (9CI)  
 (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C21 H18 O6  
 SR CA  
 LC STN Files: CA, CAPLUS, CHEMCATS

Double bond geometry as shown.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

AN 132:343978 CA  
 TI Elucidation of anthracyclinone biosynthesis by stepwise cloning of genes  
 for anthracyclines from three different Streptomyces spp.  
 AU Kantola, Jaana; Kunnari, Tero; Hautala, Anne; Hakala, Juha; Ylihonko,

Kristiina; Mantsala, Pekka  
CS Department of Biochemistry, University of Turku, Turku, FIN-20014, Finland  
SO Microbiology (Reading, United Kingdom) (2000), 146(1), 155-163  
CODEN: MROBEO; ISSN: 1350-0872  
PB Society for General Microbiology  
DT Journal  
LA English  
AB

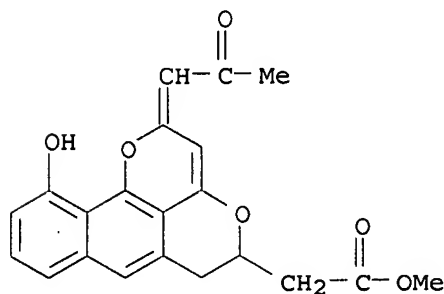
The anthracycline skeleton is biosynthesized by aromatic (type II) polyketide synthases. Furthermore, three post-polyketide steps are needed to form the basic aglycon of anthracyclines. Auramycinone was produced in *Streptomyces lividans* by introducing nine structural genes from three different anthracycline-producing *Streptomyces* species. The genes used to construct the auramycinone biosynthesis cluster were derived from nogalamycin-, daunomycin- and aclacinomycin-producing *Streptomyces* strains. The biosynthetic stages were divided into polyketide and post-polyketide steps on the assumption that the first stable intermediate would be nogalonic acid, named analogously to aklanonic acid, the precursor of several anthracyclines. Single genes were cloned in the expression construct in the order determined by the proposed biosynthetic pathway. This facilitated investigation of the products formed in the heterologous host after addition of each sep. gene to the construct. The results thus elucidate the biosynthesis steps, products and the genes responsible for the reactions needed to build up an anthracyclinone.

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2007 ACS on STN  
RN 247933-25-1 REGISTRY  
ED Entered STN: 19 Nov 1999  
CN 2H-Benzo[h]pyrano[2,3,4-de]-1-benzopyran-5-acetic acid,  
5,6-dihydro-11-hydroxy-2-(2-oxopropylidene)-, methyl ester (9CI) (CA  
INDEX NAME)

OTHER NAMES:

CN S 2502  
MF C21 H18 O6  
SR CA  
LC STN Files: CA, CAPLUS, CHEMCATS, IMSDRUGNEWS, IMSRESEARCH, TOXCENTER,  
USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

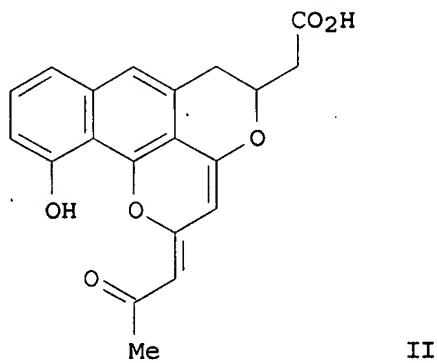
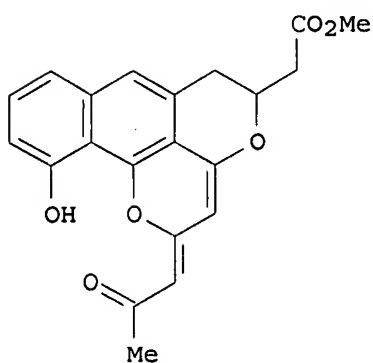
REFERENCE 1

AN. 141:1298 CA  
TI Aromatic polyketide intermediates as selective anticancer and antiviral

agents  
 IN Kunnari, Tero; Vuento, Matti  
 PA Galilaeus OY, Finland  
 SO PCT Int. Appl., 18 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004045600	A1	20040603	WO 2003-FI885	20031119
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	GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,				
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	NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,				
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	FI 2002002074	A	20040521	FI 2002-2074	20021120
	FI 114863	B1	20050114		
	AU 2003282151	A1	20040615	AU 2003-282151	20031119
	EP 1562580	A1	20050817	EP 2003-773769	20031119
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	JP 2006508146	T	20060309	JP 2004-552763	20031119
	US 2006122260	A1	20060608	US 2005-533378	20050429
PRAI	FI 2002-2074		20021120		
	WO 2003-FI885		20031119		

GI



AB The invention relates to the finding of potentiality of aromatic polyketide intermediates in drug development and, specifically, use of these compds. in development of antiviral or anticancer medicines. Specifically disclosed are compds. S2502 (I) and S2507 (II).

#### REFERENCE 2

AN 131:308648 CA  
 TI Hybrid compounds derived from the combination of anthracycline and actinorhodin biosynthetic pathways  
 AU Kunnari, Tero; Kantola, Jaana; Ylihonko, Kristiina; Klika, Karel D.; Mantsala, Pekka; Hakala, Juha  
 CS Galilaeus Oy, Kaarina, FIN-20781, Finland  
 SO Journal of the Chemical Society, Perkin Transactions 2: Physical Organic

Chemistry (1999), (8), 1649-1652

CODEN: JCPKBH; ISSN: 0300-9580

PB Royal Society of Chemistry

DT Journal

LA English

AB A new approach in the field of polyketide biosynthetic engineering, the combination of the biosynthetic routes of two different sources, is introduced. *Streptomyces nogalater* genes expressed in *S. lividans* TK24 yield the hybrid strain TK24/pSY15. Structural anal. of the products isolated from cultivation of the hybrid strain revealed the ability of the hybrid to produce novel compds. Instead of accumulating characteristic products (e.g. actinorhodin) of the host *S. lividans* TK24, or intermediate compds. expected to be generated by the plasmid pSY15 (e.g. nogalamycin precursor), the hybrid strain produces novel compds. reflecting the enzymic activity of both the host and the expressed plasmid. This implies that genes from 2 different types of aromatic polyketide biosynthesis are working together. The method described in this work complements earlier targeted biosyntheses.

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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